

Donated Water Welder Provides Cutting Edge Technology for Instructor and Students at Fulton Co. ATC

Fulton Co. ATC Principal Tom Pyron understands the importance of technology and was delighted when his area technology center became the “first school in the galaxy” to receive a one-of-a-kind water welder described as cutting edge. This break through technology has been heralded as “evolutionary” by its parent company.

What is a water welder? Invented by Dennis Klein, president of Hydrogen Technology Applications, Inc. (HTA), the water welder is a machine that can separate hydrogen from oxygen using water. The machine keeps the gases separate because the hydrogen adheres to the hydrogen and the oxygen sticks to the oxygen – that is until they undergo combustion and this produces gas on demand.



The water welder is environmentally safe because it does not produce any toxic fumes or negative by-products, is faster than a conventional welder, and easier and less expensive to operate. The biggest factor of all is that the water welder does not require a tank. It employs electricity and water and produces gas on demand.

Why Fulton Co. ATC? The Center for Strategic Alliance (CSA), a company that has an exclusive marketing contract with HTA, is located in Hickman and has great ties to the ATC. Clare and Brent Carman are the parents of former student Asia Burnett. They are also CSA's

Photo left to right: Fulton Co. ATC Welding Instructor Don Wann, CSA Director of Research and Development Brent Carman and ATC Principal Tom Pyron discuss the water welder technology.

president and director of research and development respectively. Both serve on the ATC's Information Technology Advisory Committee. The couple became familiar with the instructors and types of programs available at the ATC while their daughter was enrolled there. Mr. Maurice Dunn, chief operating officer of the same company and father of former students Tyler and Justin, is also heavily involved with the school. He serves on the Machine Tool Technology Advisory Committee. The partnership has been an invaluable experience for all concerned.

CSA serves as a catalyst among inventors, problems solvers and those individuals who can image and create a project with the movers, integrators and implementers. In short, their major goal is to "bring together all the elements needed to make a great technology a great product by taking great technologies from the mind to the marketplace."

Given this strategy, the close proximity of the company with the ATC, a technology based curriculum available at the ATC, students who have an opportunity to seamlessly flow from secondary to postsecondary education via articulation and dual credit agreements, and/or students who enter directly into the workforce upon graduation, Clare Carman devised a brilliant plan of introducing cutting edge and new technologies into the school.

CSA helps commercialize technologies and they feel that one of the best ways to get it into new hands is to introduce it through schools. Company officials make a point of networking with universities, colleges and businesses for new inventions.

"The what is the new technology. The how we get it into the hands of new users is through an area technology center. Kids embrace new technologies with enthusiastic vigor. This introduces change in any industry and gives us a vehicle. In essence, that's what we are trying to do here - give the school a break," says Brent Carman. "These students get the benefit of new technology. This is a collaborative endeavor because

we can make changes based on the feedback we have received from the users.”



“Until you are grounded in an environment where the technology works, you can’t engineer changes to make it better. This provides a formal way of accomplishing this task,” says Brent. “Everyone is growing and moving forward together - the inventor, manufacturer and user – everyone wins.”

Over this past year, Fulton Co. ATC Machine Tool Technology Instructor Donald Wann has been able to use the water welder technology in his class. The Carmans encouraged HTA to donate a unit for school use and students love the technology.

“I feel very honored and blessed to have had this technology placed in my hands. It provides an opportunity for us to nurture our upcoming generation, who are the future of our country,” says Wann. “The power of this technology is explosive and by putting it in the hands of our future engineers, manufacturers, and technicians, we can channel that energy into a brighter future for everyone. Every aspect of this technology is positive.”

Instructors across the state understand the safety issues associated with traditional welding and have always had concerns when it comes to this very important aspect of the industry.

“Safety was one of the major reasons that I was so attracted to this system. I literally was frightened for young people because acetylene is so volatile, explosive and unstable. It’s unforgiving which means you don’t make mistakes; however, with this welder, there is

no cause for concern,” says Wann. “Our main focus is to prepare young people for life. They are just beginning to see what direction they are going into and this has been a tremendous asset to our program. In my classroom, there are times when my students take part in special projects and one area of great interest is welding. An exciting aspect of using this technology is that we are on the leading edge because the water welder will change the future of the world.”

“We are the first school in the galaxy to be given this technology,” says Pyron. “We met the Carmans during an academic banquet and they invited us to visit their company and see this technology. I took Don Wann and Terry Sullivan. We were all impressed and immediately began thinking of all the possibilities for the use of this technology.”



A short time later, the Carmans initiated the donation of the water welder to Wann’s program. Pyron recalls a conversation among the three of them when Brent Carman delivered the machine to the school.

“He said to Don Wann, ‘Take this machine and play with it to see what all it can do,’” says Pyron. “We have followed his wishes. We have even had some executives from the Department of Defense (DOD) come to our ATC to learn about this technology. As a result, the DOD is now using the water welder in some of its agencies. To me, that’s incredible.”

Don Wann wanted others in the system to have an opportunity to learn about and use the technology. He knew the water welder would generate grand excitement throughout the system.

“From the beginning, it was my intent that this technology would be presented to

all our welding, machine tool technology, and industrial maintenance technology instructors at our summer conference,” says Wann.

Through their tireless efforts to bring this amazing technology to the front line, it became a reality. Mr. Carman was pleased to coordinate a special presentation during the summer conference. The first part of the seminar included a PowerPoint show and discussion of the technology. The second phase of the seminar included hands-on experimentation with the machine. Instructors from all across the state were absolutely stunned and astonished with the technology and immediately wanted machines for their own labs.

“To me, looking at this from a principals’ point of view is - this is a big deal. Business and industry doesn’t always take us seriously,” says Pyron. “But, for business and industry and creative people to start looking at ATCs as a starting point, that’s exciting because we teach the people who will be using the technology. This whole idea of introducing technology in ATCs is great. That’s something I would love to see on a statewide basis.”

Editor’s note: OCTE Training and Development Specialist Jill Ralston approached Brent Carman during the summer conference with an offer to visit Carroll Co. ATC and meet some of the local business and industry members of the Carroll Co. Consortium. He and Mr. Dunn accompanied her and visited Carroll Co. ATC. Stay tuned.



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